



# **Intel® Pentium® M Processor, Intel® 855GME Chipset, and Intel® 6300ESB ICH Development Kit**

**Specification Update**

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*July 2005*



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# Revision History

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Date	Version	Description
July 2005	001	Initial release of this document.

# Preface

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This document is an update to the specifications contained in the *Intel® Pentium® M Processor, Intel® 855GME Chipset, and Intel® 6300ESB ICH Development Kit User's Manual* (Order # 301176). This specification update is intended for hardware system manufacturers and software developers of applications, operating systems, and tools. It contains errata and documentation changes that pertain to the Development Kit.

For errata, specification changes, and clarifications regarding specific board components, please refer to the respective specification update documents as detailed in [“Related Documents” on page 5](#).

Unless otherwise noted, it should be assumed that any component-level errata are applicable to the printed board assembly (PBA) containing the specific stepping of the component.

## Nomenclature

**Errata** are design defects or errors. These may cause the Development Kit's behavior to deviate from published specifications. Hardware and software designed to be used with any given stepping must assume that all errata documented for that stepping are present on all devices.

**Documentation Changes** include typos, errors, or omissions from the current published specifications. These will be incorporated in any new release of the specification.

**Note:** Errata remain in the specification update throughout the product's lifecycle, or until a particular stepping is no longer commercially available. Under these circumstances, errata removed from the specification update are archived and available upon request. Documentation changes are removed from the specification update when the appropriate changes are made to the appropriate product specification or user documentation (datasheets, manuals, etc.).

## General Information

A development kit board is identified by its PBA (printed board assembly) number. This number is printed on either a thin yellow or white sticker along one of the board edges. Assuming the BIOS has not been upgraded since board delivery, a board may also be identified by the BIOS revision number that is displayed during POST.

**Table 1. Development Kit Identification Information**

PBA Revision	BIOS Revision	Notes
C32583-300	FTBGG015	1, 2
C32583-301	FTBGG021	1, 2

**Notes:**

- The PBA number is found on a small label on the component side of the board.
- The Development Kit used on this PBA revision consists of three components listed in Table 2.

**Table 2. Development Kit Components**

Device	Stepping	S-Spec Numbers
Intel® Pentium® M Processor	B1	SL6FA
Intel® 855GME Chipset Graphics and Memory Controller Hub (GMCH)	A2	SL72L
Intel® 6300ESB I/O Controller Hub (ICH)	A3	SL76G

## Related Documents

**Table 3. Related Documents (Sheet 1 of 2)**

Document	Order Number	Location
Intel® Pentium® M Processor Datasheet	252612	<a href="http://developer.intel.com/design/mobile/datashts/252612.htm">http://developer.intel.com/design/mobile/datashts/252612.htm</a>
Intel® Pentium® M Processor Specification Update	252665	<a href="http://developer.intel.com/design/mobile/specupdt/252665.htm">http://developer.intel.com/design/mobile/specupdt/252665.htm</a>
Intel® Pentium® M Processor on 90 nm Process with 2-MB L2 Cache Datasheet	302189	<a href="http://developer.intel.com/design/mobile/datashts/302189.htm">http://developer.intel.com/design/mobile/datashts/302189.htm</a>
Intel® Pentium® M Processor on 90nm Process with 2-MB L2 Cache Specification Update	302209	<a href="http://developer.intel.com/design/mobile/specupdt/302209.htm">http://developer.intel.com/design/mobile/specupdt/302209.htm</a>
Intel® Celeron® M Processor Datasheet	300302	<a href="http://developer.intel.com/design/mobile/datashts/300302.htm">http://developer.intel.com/design/mobile/datashts/300302.htm</a>
Intel® Celeron® M Processor on 90 nm Process Datasheet	303110	<a href="http://developer.intel.com/design/mobile/datashts/303110.htm">http://developer.intel.com/design/mobile/datashts/303110.htm</a>
Intel® Celeron® M Processors Specification Update	300303	<a href="http://developer.intel.com/design/mobile/specupdt/300303.htm">http://developer.intel.com/design/mobile/specupdt/300303.htm</a>
Intel® 855GM/GME Chipset Graphics and Memory Controller Hub (GMCH) Datasheet	252615	<a href="http://developer.intel.com/design/chipsets/datashts/252615.htm">http://developer.intel.com/design/chipsets/datashts/252615.htm</a>
Intel® 855GM/GME Chipset Graphics and Memory Controller Hub (GMCH) Specification Update	253572	<a href="http://developer.intel.com/design/chipsets/specupdt/253572.htm">http://developer.intel.com/design/chipsets/specupdt/253572.htm</a>

**Table 3. Related Documents (Sheet 2 of 2)**

Document	Order Number	Location
<i>Intel® 855GME Embedded Chipset Graphics and Memory Controller Hub (GMCH) Specification Update Addendum</i>	274004	<a href="http://developer.intel.com/design/intarch/specupdt/274004.htm">http://developer.intel.com/design/intarch/specupdt/274004.htm</a>
<i>Intel® 6300ESB I/O Controller Datasheet</i>	300641	<a href="http://developer.intel.com/design/intarch/datashts/300641.htm">http://developer.intel.com/design/intarch/datashts/300641.htm</a>
<i>Intel® 6300ESB I/O Controller Hub (ICH) Specification Update</i>	300884	<a href="http://developer.intel.com/design/intarch/specupdt/300884.htm">http://developer.intel.com/design/intarch/specupdt/300884.htm</a>
<i>Intel® Pentium® M Processor, Intel® 855GME Chipset and Intel® 6300ESB ICH Development Kit User's Manual</i>	301176	<a href="http://developer.intel.com/design/intarch/manuals/301176.htm">http://developer.intel.com/design/intarch/manuals/301176.htm</a>

# Summary Table of Changes

The following tables indicate the errata or documentation changes which apply to the Intel® Pentium® M Processor, 855GME Chipset, and 6300ESB ICH Development Kit. Intel may fix some of the errata in a future version of the Development Kit, and account for the other outstanding issues through documentation or specification changes as noted. These tables use the following notations:

## Codes Used in Summary Table

### Status

Doc:	Document change or update will be implemented.
Fixed:	This erratum has been previously fixed.
NoFix:	There are no plans to fix this erratum.
Plan Fix:	This erratum may be fixed in a future stepping of the product.

### Row

Change bar to left of table row indicates this erratum is either new or modified from the previous version of the document.

## Errata

Number	Page	Affected PBA(s)	Status	Errata
1	8	C32583-301	Fixed.	Non-operational AC'97 audio

## Documentation Changes

Number	Page	Revision	Documentation Change
1	9	002	Major revision of the Development Kit User's Manual

# Errata

## 1. Non-operational AC'97 audio

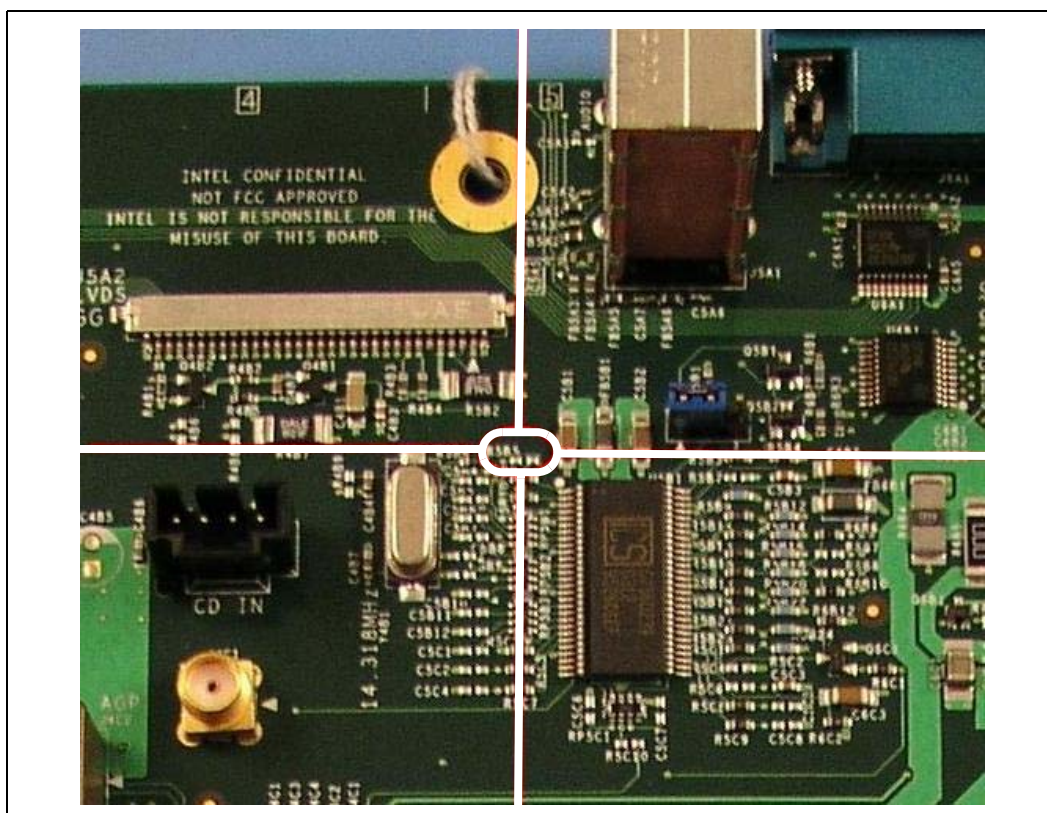
**Problem:** A manufacturing issue resulted in a missing series resistor on the AC'97 clock on certain boards.

**Implication:** Affected boards may not load AC'97 sound drivers properly; resulting in non-operational AC'97 audio.

**Workaround:** Inspect board for the missing 33 ohm, 0603 resistor (R5B5), as identified in Figure 1. If this resistor is missing, please contact your local Intel representative for RMA instructions.

**Status:** Fixed.

**Figure 1. Missing Resistor (R5B5) Location**





# Documentation Changes

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The documentation changes listed in this section apply to the *Intel® Pentium® M Processor, Intel® 855GME Chipset, and Intel® 6300ESB ICH Development Kit Users Manual* (Order# 301176). All documentation changes will be incorporated into a future version of that manual.

## 1. Major revision of the Development Kit User's Manual

A major revision of the *Intel® Pentium® M Processor, Intel® 855GME Chipset, and Intel® 6300ESB ICH Development Kit Users Manual* (Rev -002) was completed. Notable revisions are listed below:

- **Section 1.5**
  - Added relevant documents.
- **Section 2.1**
  - Removed reference to kit containing a power supply.
- **Section 2.2**
  - Updated board features summary.
  - Removed reference to 24-bpp LVDS panel support.
  - Updated System I/O section. Removed Section 2.2.5.
- **Section 2.6**
  - Updated Jumper Settings table and moved table to Section 4.3.
- **Section 3.1**
  - Replaced Figure 2 with updated block diagram.
- **Section 3.3**
  - Updated System Features and System Clocks sections.
  - Corrected errors in System I/O section.
  - Corrected Figure 3 (Back Panel I/O Connectors) and moved to Section 4.7.
  - Added AGP/ADD Connector, LVDS Connector, and AC'97 Audio sections.
- **Chapter 4**
  - Replaced Board Layout Diagram with corrected version.
  - Corrected Expansion Slots and Sockets section.
  - Added missing tables.
  - Corrected On-Board Connectors section.
  - Added Jumpers and On-board Headers sections.
- **Appendix A**
  - Replaced Fab C, Rev 0 schematics with Fab C, Rev 3 version.